

## **OIL ANALYSIS REPORT**

Sample Rating Trend



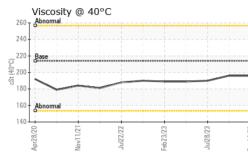
KEMP QUARRIES / PRYOR STONE [67853] WL137 Component **Front Right Final Drive** 

PETRO CANADA PRODURO TO-4 SAE 50 (--- )

PETRO CANADA PRO	JUURO TO-4 SAE	. 50 ( )	Apr2020	Nov2021 Jul2022	Feb2023 Jul2023	Dec2023	
DIAGNOSIS	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Recommendation	Sample Number		Client Info		PCA0084401	PCA0086226	PCA0084227
esample at the next service interval to monitor. (	Sample Date		Client Info		16 Dec 2023	06 Oct 2023	28 Jul 2023
ustomer Sample Comment: Pm2 performed. All	Machine Age	hrs	Client Info		32690	32269	31785
samples taken. Engine oil, transmission oil, and	Oil Age	hrs	Client Info		905	484	2146
filters changed. )	Oil Changed		Client Info		Oil Added	Oil Added	Changed
ear	Sample Status				NORMAL	NORMAL	NORMAL
l component wear rates are normal.	CONTAMINA	TION	method	limit/base	current	history1	history2
here is no indication of any contamination in the	Water		WC Method	>0.2	NEG	NEG	NEG
uid Condition	WEAR META	LS	method	limit/base	current	history1	history2
e condition of the oil is acceptable for the time in	Iron	ppm	ASTM D5185m	>800	11	10	33
rvice.	Chromium	ppm	ASTM D5185m	>10	0	0	<1
	Nickel	ppm	ASTM D5185m	>5	0	0	0
	Titanium	ppm	ASTM D5185m	>15	0	0	0
	Silver	ppm	ASTM D5185m		0	0	0
	Aluminum	ppm	ASTM D5185m	>75	1	1	4
	Lead	ppm	ASTM D5185m		<1	<1	0
	Copper	ppm	ASTM D5185m	>75	1	<1	2
	Tin	ppm	ASTM D5185m		<1	<1	<1
	Vanadium	ppm	ASTM D5185m		0	0	0
	Cadmium	ppm	ASTM D5185m		0	0	0
	ADDITIVES		method	limit/base	current	history1	history2
	Boron	ppm	ASTM D5185m	2	<1	0	1
	Barium	ppm	ASTM D5185m	0	0	0	0
	Molybdenum	ppm	ASTM D5185m	0	0	<1	0
	Manganese	ppm	ASTM D5185m	0	<1	0	<1
	Magnesium	ppm	ASTM D5185m	9	19	5	14
	Calcium	ppm	ASTM D5185m	3114	3386	3785	3364
	Phosphorus	ppm	ASTM D5185m	1099	915	1044	1044
	Zinc	ppm	ASTM D5185m	1245	1118	1370	1297
	Sulfur	ppm	ASTM D5185m	7086	4145	4986	6848
	CONTAMINA	NTS	method	limit/base	current	history1	history2
	Silicon	ppm	ASTM D5185m	>400	14	15	11
	Sodium	ppm	ASTM D5185m		1	<1	<1
	Potassium	ppm	ASTM D5185m	>20	0	<1	0
	VISUAL		method	limit/base	current	history1	history2
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
	Free Water	scalar	*Visual		NEG	NEG	NEG
ort Id: KEMPRV [WI ISCAR] 06040665 (Concrated: 01/04/202							Submitted



## **OIL ANALYSIS REPORT**



		Visc @ 40°C	cSt	ASTM D44	5 213.9	196	196	190
		SAMPLE	IMAGES	method	limit/base	e current	history1	history2
23 - 23 - 23 - 23 - 23 - 23 - 23 - 23 -	(23	Color				no image	no image	no image
JUK 2/22 Feb 23/23	Jul28/23 Dec16/23	Bottom				no image	no image	no image
		GRAPHS						
		Iron (ppm)				Lead (ppm)		
		1500 - Severe				25 - Severe		
	udd	1000 - Abnormal				15-		
		500 -				10 - Abnormal		
		20-00	22	23	23	20 00	22	23
		Apr28/20 Nov11/21	Jul22/22	Feb23/23 Jul28/23	Dec16/23	Apr28/20	Jul22/22 Feb23/23	Jul28/23
		Aluminum (	ppm)			Chromium (p	pm)	
		Severe				25 - Severe		
		100 Abnormal				20 - 15 -		
		50 -				10 - Abnormal		
		0	2		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		3.	en
		Apr28/20	Jul22/22	Feb23/23 Jul28/23	Dec16/23	Apr28/20	Jul22/22 Feb23/23	Jul28/23
		Copper (pp	m)			Silicon (ppm)		
		Severe				800 Severe		
	Ę	100			ш Ц	600 -		
	ē	Abnormal				400 - Abnormal		
						200		
		Apr28/20	Jul22/22	Feb23/23 Jul28/23	Dec16/23	Apr28/20	Jul22/22 Feb23/23	Jul28/23
		Viscosity @		£ ,		Additives	, ц	-, -,
		260 Abnormal				500 calcium		$\sim$
		220 - <b>Base</b> 200 -				000 - zinc		
	24 I.Q.	3 180				000 - 500 -		
		160 - Abnormal			10	000 -		And in case of the part of the state of the
		Apr28/20	Jul22/22 -	Feb23/23 - Jul28/23 -	Dec16/23	Apr28/20	Jul22/22 - Feb23/23 -	Jul28/23
		Ap	Ju	Fel	De	Ap	Ju	٦ <sup>,</sup> ,
ICALDONATORY	Laboratory Sample No. Lab Number Unique Number Test Package	: WearCheck U : PCA0084401 : 06049665 : 10810273 : MOB 1	Reciev Diagno Diagno	ved :0 osed :0 ostician :S	2 Jan 2024 4 Jan 2024 Jean Felton	13 Kemp (	Quarries - Pryor	r Stone - Pryc 1050 E 520 R Pryor, O US 7436 Contact
	s sample report, o	contact Custome re outside of the					pryor@p	oryorstone.cor T